

C. Remarks

The claims are 1-15, with claims 1, 8, and 11 being independent. The independent claims have been amended to further clarify the present invention. Support for this amendment may be found, for example, in Fig. 1 and the corresponding description in the specification. No new matter has been added. Reconsideration of the claims is expressly requested.

Claims 1-5, 8, and 11-13 stand rejected under 35 U.S.C. § 103(a) as being allegedly obvious from U.S. Patent Application No. 2005/0272169 A1 (Griffin) in view of U.S. Patent No. 5,229,297 (Schnipelsky). Claims 6, 7, 9, 10, 14, and 15 stand rejected under 35 U.S.C. § 103(a) as being allegedly obvious from Griffin and Schnipelsky in view of U.S. Patent No. 6,432,719 B2 (Vann). The grounds of rejection are respectfully traversed.

Prior to addressing the merits of rejection, Applicants would like to briefly discuss some of the features and advantages of the presently claimed invention. That invention is related, in pertinent part, to a biochemical reaction cartridge and to a method and system utilizing this cartridge. The biochemical cartridge in accordance with the claimed invention includes a reaction portion with at least one blank reaction chamber and a solution storage portion, which is not superposed on the reaction portion when the cartridge is not in use. As a result, only the solution storage portion containing desired reaction materials may be stored at low temperatures or even in a frozen state, if desired. Also, different solution storage portions can be independently used in combination with the same reaction portion depending on what type of inspection is desired.

Furthermore, the reaction portion has a port at a side surface thereof for permitting access to the chamber. For instance, a port, such as nozzle port 4 shown in Fig. 1, can be used to apply or reduce pressure to move the solution in the reaction portion. The reaction portion also has a supply port in its top surface on a part where the storage portion is not superposed at the time when the cartridge is used, such as supply port 3 shown in Fig. 1.

Griffin is directed to a biochemical analysis device. This reference discloses that an intermediate layer is provided between a solution storage chamber containing a solution and a reaction chamber, and the solution is moved from the solution storage chamber to the reaction chamber that contains dry reagents by breaking the intermediate layer by a pin, a projection, pressurization, or heating. However, as the Examiner acknowledged, Griffin fails to disclose or suggest a cartridge in which a reaction portion has a port at a side surface thereof for permitting access to the chamber, as presently claimed. Also, Griffin does not disclose or suggest a structure in which there is a supply port in a part of the top surface of the reaction portion where the storage portion is not superposed at the time of use.

The Examiner referred to Schnipelsky for a teaching regarding a port at a side surface. Schnipelsky is directed to a containment cuvette for PCR. Specifically, this reference teaches forming an enclosed area so that a reaction is completed in a single cuvette to prevent environmental contamination (Abstract). Therefore, Applicants respectfully submit that one skilled in the art would not look to Schnipelsky to modify the device in Griffin, which operates based on a different principle – superposed portions. In fact, Schnipelsky teaches away from a concept of a combination of two separable portions.

Thus, Applicants respectfully submit that the modification of Griffin by the teachings in Schnipelsky is tantamount to hindsight by using the present application as a blueprint.

Regardless of the above, neither Griffin nor Schnipelsky discloses or suggests a structure in which there is a port on a side surface of the reaction chamber and a supply port in the top surface thereof. Thus, even if the teachings of these references could be combined, the resulting combination still falls short of the presently claimed invention.

Vann cannot cure the deficiencies of Griffin and Schnipelsky. Specifically, like these references, Vann does not teach a cartridge with the ports as claimed.

Accordingly, whether considered separately or in combination, the cited references cannot affect the patentability of the presently claimed invention. Wherefore, withdrawal of the outstanding rejections and expedient passage of the application to issue are respectfully requested.

Applicants' undersigned attorney may be reached in our New York office by telephone at (212) 218-2100. All correspondence should continue to be directed to our address given below.

Respectfully submitted,

/Jason M. Okun/
Jason M. Okun
Attorney for Applicants
Registration No. 48,512

FITZPATRICK, CELLA, HARPER & SCINTO
30 Rockefeller Plaza
New York, New York 10112-3801
Facsimile: (212) 218-2200